XIV. *On some rare and beautiful Coleopterous Insects from Silhet, chiefly in the Collection of* Frederick John Parry, *Esq., F.L.S., &c. By the Rev.* Frederick William Hope, *M.A., F.R.S., F.L.S., &c.*

Read March 1st, 1842.

THE last memoir which I had the honour of submitting to the notice of the Linnean Society, related to some insects of Assam; the present communication refers to others from Silhet, a locality south of the former, and for beauty they may justly vie with any which the gorgeous East produces.

It must be remarked of the above-mentioned localities, that both are extratropical, and as they are nearly adjacent, we might naturally anticipate a certain similarity of entomological character. The most remarkable peculiarity, however, is the entire accordance which these extratropical insects evince with those of the torrid zone, a similarity marked not by richness of colouring and metallic splendour only, but also by various typical forms which are regarded as peculiar to the tropics.

From a careful examination of the insects of the Himalaya along with those of our British East Indian Presidencies, and of others from Chusan, lately sent to England by one of the most indefatigable naturalists of the present day, Dr. Cantor, I have no fear in asserting, that uniformity will be found to be one of the leading characteristics of Indian entomology, and that the insects of Assam, Silhet, and other localities, must be regarded as possessing the tropical characters, although the regions themselves are extratropical. The geographical distribution, therefore, proposed by Latreille, graduated by isothermal lines and climatical parallels, is clearly as artificial and illusory as the imaginary lines which are supposed to bound the tropics.

The collection from which the present novelties are described belongs to Frederick John Parry, Esq. of Cheltenham, the possessor of one of the finest cabinets of exotic insects in Great Britain. The insects were obtained by

purchase, and have been forwarded to me for the purpose of describing the novelties; and I may venture to assert, without fear of contradiction, that, when examined, they will be considered a very valuable addition to our acquaintance with oriental entomology. Before entering on the specific descriptions I have one other remark to make. The present collection of insects from Silhet, as well as others from other parts of India, are frequently greatly damaged by the substances used with the intention of preserving them; the collectors, not content with using abundance of arsenical soap, apply also to the insects a varnish (derived probably from the resin called anime), which is apparently painted over them, and to this is sometimes added turpentine, as well as other ingredients of a resinous nature, with which I am unacquainted. Now if spirits of wine are used to clean these insects, a white scurf spreads over the whole surface, and this is too often increased by a renewed application of spirit. The only means used at present have been warm water and brushing them well with a camel's hair brush. I am told, however, that a solution of caoutchouc is more efficacious than anything else in restoring the insects to their original brightness. It ought, however, to be repeated till the insects are thoroughly cleared of the arsenic and other ingredients, used with the intention of preserving them, but which certainly have often a contrary effect, as many insects, which externally appear sound, are internally entirely rotten and soon fall to pieces. For this reason the oriental collections offered for sale in this country are frequently scarcely worth purchasing.

Lucanidæ.

Hexarthrius, *Burmeister.*

Sp. 1. Hex. Parryi. Tab. X. fig. 2.

Niger, mandibulis exsertis subdenticulatis bidentatis, capite thoraccque scabriusculis, elytris posticè castaneis.

Long. lin. 36; lat. lin. 10.

Statura *Luc. Rhinocerotis*, Fab., at latior. *Antennæ* articulis quinque ultimis fusco-pubescentibus, sexto nigro valdè acuto. *Mandibulæ* arcuatæ, capite longiores, intùs crenatæ, bidentatæ. *Caput* utrinque unidentatum, disci medio fortiter impresso. *Thorax* an-

gulis *anticis* externè obtusis, *posticis* ante apicem parùm acutis. *Elytra* humeris suturâ marginibusque nigris, reliquâ disci parte castaneo insignitâ. *Pedes* tibiis anticis externè denticulatis, mediis unispinosis, posticis inermibus.

The above insect, which is the largest species of *Hexarthrius* known, was obtained in Silhet; it is described from the rich oriental cabinet of Frederick Parry, Esq., and is named in honour of that zealous entomologist.

Odontolabis*, *Burmeister*.

Sp. 2. Odontolabis Cuvera. Tab. X. fig. 3.

Ater, mandibulis valdè exsertis denticulatis, elytris pallidè castaneis literâ V nigrâ signatis.

Long. mandibulis inclusis lin. 34; lat. lin. 11.

Caput supernè elevatum, anticè fortiter excavatum. *Mandibulæ* porrectæ, capite longiores, arcuatæ, dentatæ; dente ad basin acuto, 2do ultra medium longiori, apicibusque subfurcatis. *Elytra* flavo-testacea, tenuissimè nigro marginata, in disci medio literâ V nigrâ insignita. *Pedes* antici tibiis externè spinosis, quatuor posteriores inermes.

Mr. Saunders has figured in the 'Entomological Transactions' a *Lucanus* from India, which he regards as a variety of *Luc. bicolor* of Fabricius, but which is evidently a distinct species. I suggest, therefore, the name of *Saundersii* being applied to that of the above-mentioned author, as it was originally described by him: it belongs to the same genus as *Odontolabis*. *Lucanus Burmeisteri* of my cabinet is the type of a genus allied to *Odontolabis*, and is remarkable for having all its tibiæ unarmed.

Sp. 3. Odontolabis Baladeva.

Niger, mandibulis porrectis multidentatis, capite thoraceque utrinque unidentatis.

Long. lin. 26; lat. 10.

Habitat in Silhet.

Caput anticè et posticè sinuatum. *Mandibulæ* porrectæ arcuatæ, capite parùm longiores. *Thorax* utrinque dentatus, lævis, foveolis rotundatis binis posticè impressus. *Elytra* glabra, nitida; tibiis anticis externè denticulatis, quatuor posterioribus inermibus.

* From ὀδοὺς, *dens*, and λαβὶς, a pair of pincers.

To the same genus belong *Lucanus Dalmanni* and *Luc. Cumingii* of my cabinet. I am aware also of other species which are wrongly regarded as varieties of the Fabrician *Luc. Alces*.

Dorcas, *MacLeay*.

Sp. 4. Dorcas Westermanni.

Niger, mandibulis porrectis multidentatis capite thoraceque parùm brevioribus.

Long. lin. 26½; lat. lin. 9.

Thorax lateribus irregulariter angulatis. *Elytra* nigro-castanea, lineâ longitudinali (in singulo) ferè ad marginem impressâ. *Pedes* antici tibiis denticulatis; quatuor posteriores unispinosi.

The above insect, received from Silhet, is named in honour of Westermann, the prince of Danish entomologists.

Sp. 5. Dorcas De Haani.

Niger, mandibulis porrectis capite parùm longioribus: dente forti ferè trigono ante basin posito: reliquis minoribus.

Long. lin. 22; lat. lin. 7¼.

Habitat in agro Assamensi.

Caput clypeo lato ciliato, prominentiâ frontis anticè latiori. *Mandibulæ* capite longiores, apicibus valdè acutis, dente valido suprà et internè instructæ. *Thoraæ* lævis, marginatus. *Elytra* nigra, nitida, lateribus rugoso-punctulatis. *Pedes* tarsis subtùs auricomatis.

I have described the above species from my own collection: it was presented to me by Lady Jones, and was taken in the Assamese territories. It is here introduced, as it appears to recede from the typical oriental species of *Dorcas*, and is named in honour of Professor De Haan of Leyden, an able oriental entomologist.

Sp. 6. Lucanus Brahminus.

Niger, mandibulis valdè exsertis denticulatis capiti thoracique æqualibus, thorace posticè utrinque dentato, elytris glabris marginatis.

Long. lin. 21½; lat. lin. 6½.

Habitat in Silhet.

Totum corpus suprà nigrum; clypeo anticè 2-dentato. *Mandibulæ* apicibus acutis, denticulatæ, dente majori ad basin armatæ aliisque minoribus ante apicem instructæ. *Thorax* angulis anticis ferè rectis, posticè utrinque dentatus. *Pedes* tibiis anticis multidentatis, quatuor posterioribus unidentatis.

Sp. 7. Lucanus Buddha.

Niger nitidus, mandibulis valdè porrectis capite thoraceque longioribus denticulatis.

Long. lin. 21; lat. lin. 6.

Habitat in Silhet.

Caput anticè valdè excavatum, angulis omnibus subrotundatis. *Mandibulæ* thorace capiteque longiores, denticulatæ, dente ad basin robusto, 2do minori, 3tio majori, reliquis minutis, apicibusque subfurcatis. *Thorax* capite latior, marginatus. *Elytra* thorace minora, ferè recta, nigra, nitida. *Pedes* tibiis anticis externè serratis, mediis unispinosis, posticis inermibus.

Goliathidæ, *Lamarck.*

Diphyllomorpha, *Hope.*

Sp. 8. Diphyllomorpha Mearsii. Tab. X. fig. 1.

Suprà viridis, disco roseo-opalino tincto, femoribus tibiisque virescentibus flavo-ciliatis.

Long. lin. 10¼; lat. lin. 4.

Habitat in montibus Himalayanis.

Caput oblongo-quadratum, margine exteriori parùm reflexo; oculis magnis, nigris. *Antennæ* articulo 1mo crasso viridi, sex sequentibus piceis, lamellâ foliatâ nigrâ internè flavo-ciliatâ. *Thorax* convexus, marginibus externis subelevatis, disci lateribus punctulatis. *Elytra* acuminata, viridia, nigro marginata, disci medio opalino colore nitente. *Corpus* infrà aurato-viride, abdominis segmentis colore saturatiore inquinatis. *Pedes* quatuor anteriores rugoso-spinosi, bini postici rugosi flavo ciliati, tarsis nigricantibus.

The above insect is named in honour of G. Mears, Esq., late of the East India Company's service, and an assiduous collector of Indian entomology.

It will be seen that I regard the present species as the type of a distinct genus closely allied to *Rhomborhina*. I know of no instance in the *Cetoniadæ*

where the antennæ differ so remarkably as in the above insect. The male has the fore tibiæ simple, and the long clava of the antennæ; it has also the abdomen deeply impressed with a longitudinal furrow down the middle, which, although a great character in true *Cetoniadæ*, is rare in *Rhomborhinæ*. The male has also the podex larger than the female. Another character of still greater importance, separating it at once from the typical *Rhomborhinæ*, consists in the elongated, serrated, and narrower mesosternum.

Since writing the above, I have received a note from Captain Parry, informing me that the above insect was taken at Darjeling, thirty miles from the mountain of Dhawalaghiri, which is nearly in the centre of Nepaul, in about 85° of east longitude, and in latitude 28½° north. The mountain is 8000 feet above the level of the sea. The appearance, therefore, of tropical forms on mountain ranges of considerable elevation is a fact worthy of record.

Rutelidæ, *Latreille.*

Mimela, *Kirby.*

Sp. 9. Mimela Passerinii, *Parry.*

Viridis, thoracis lateribus luteolis, elytrorum marginibus elevatis pallidè virescentibus, corpore infrà roseo-cupreo, pectore capillis longis flavescentibus obsito.

Long. lin. 9¼; lat. lin. 4¼.

Habitat in montibus Himalayanis.

Caput clypeo ferè quadrato. *Antennæ* articulis ternis ultimis clavam elongatam lineari-lanceolatam efformantibus. *Corpus* suprà viride, creberrimèque punctulatum; infrà roseo-cupreum, pectore capillis longis flavescentibus obsito. *Pedes* piceo-cuprei, capillis rufis ciliati.

The above insect evidently belongs to *Mimela*, as the presence of a prosternum attests; it is armed at the mesosternum with a small spine, like the barb of a spear. It is remarkable also by the leaflets of the antennæ being more fully developed than in the type of *Mimela*. As the species of this oriental genus are very numerous, it may be well to subdivide them: I suggest, therefore, the adoption of the term *Micraspis*, to include those species of *Mimela* which possess a prosternum as well as an armed mesosternum.

BUPRESTIDÆ, *Fab.*

CHRYSOCHROA, *Delaporte.*

Sp. 10. CHRYSOCHROA EDVARDSII. TAB. X. fig. 4.

Viridi-aurata, thorace cupreo-purpureo, elytris fasciâ irregulari maculâ flavâ insignitis, corpore subtùs roseo-cupreo, pedibus concoloribus.

Long. lin. 27; lat. lin. $8\frac{3}{4}$.

Caput æneum, in medio fortiter excavatum, punctatum. *Thorax* cupreo-æneus, depressus, trapezoidalis; margine posteriori subsinuato. *Elytra* viridi-ænea, cupreo tincta, lineis longitudinalibus insignita; macula irregularis flava ad disci medium posita. *Corpus* infrà roseo-cupreum, punctatum, igne micante fulgidum, annulis abdominis posticè viridibus. *Pedes* femoribus cupreo-æneis nitidis; *tibiis* rectis viridibus; tarsis suprà concoloribus, subtùs fusco-spongiosis.

The nearest species of my acquaintance allied to *Chrysochroa Edvardsii* is a beautiful species named *Perottetii* by Mons. Guérin. The superb *Buprestis* just described is named in honour of Milne Edwards, Professor of Natural History in Paris, who has lately been elected to the Entomological Chair formerly held by Audouin, the successor of Latreille.

LONGICORNES.

MONOHAMMUS, *Megerle.*

Sp. 11. MONOHAMMUS SULPHURIFER, *Hope.* TAB. X. fig. 5.

Corpore toto suprà et infrà flavo-sulphureo, antennis pedibusque nigro cinereoque variegatis.

Long. lin. 13; lat. lin. $4\frac{3}{4}$.

Caput fronte declivi flavo; lineâ tenui longitudinali fortiter incisâ. *Thorax* utrinque spinis nigricantibus armatus. *Elytra* ad apicem rotundata, capillis sulphureis obsita, maculâ rotundatâ parvâ brunneâ (in singulo) ad disci medium insignita. *Pedes* nigricantes; tarsis infrà fusco-pilosis.

The above insect is from Silhet. In my former memoir on the 'Insects of Assam,' two other species of this genus will be found described; and on reference to my collection I find that I possess five other Indian species, which are

provisionally named *sulphureus, plumbeus, argillaceus, cervinus,* and *miniatus.* The three first are from Assam, the next is from the Tenasserim coast, and the last from Japan. The oriental *Monohammi* evidently belong to a peculiar section, and should be separated from the European species and formed into subgenera.

PURPURICENUS.

Sp. 12. PURPURICENUS RUBRIPENNIS. TAB. X. fig. 6.

Violaceus, elytris rubro-marginatis maculâ subquadratâ in medio disco insignitis, pedibus concoloribus.

Long. lin. 15; lat. lin. 4.

Habitat in Silhet.

Antennæ nigro-violaceæ. *Thorax* concolor, rugosus et tomentosus. *Scutellum* cyaneum. *Elytra* rubro-miniata, maculis irregularibus nigris insignita. *Totum corpus* infrà violaceum.

The genus *Purpuricenus* has not yet, I believe, been noticed as occurring in the East Indies. The above insect deviates from the typical species; it may remain, however, for the present arranged under that genus, until the species are more thoroughly investigated. One from Gozo, near Bombay, in my collection is named after Colonel Sykes, and a second, from Japan, is called *Titsingii* by De Haan. It is probable also that *Cerambyx sanguinolentus* of Olivier belongs to the same genus.

ZONOPTERUS*, *Hope,* n. g.

Caput mandibulis arcuatis, fronte declivi, cornu brevi utrinque ad basin antennarum. *Antennæ* e medio oculorum surgentes, 11-articulatæ, articulo basali apice crassiori, 2do minimo, 3tio longissimo, 4to fere dimidio minori, 6 sequentibus ferè æqualibus, ultimo longiori acuto. *Thorax* depressus, capite duplò longior. *Elytra* thorace triplò longiora, parallela, apicibus rotundatis. *Pedes* femoribus 4 anterioribus incrassatis, posticis duplò majoribus subcompressis; tibiæ posticæ subincurvæ.

* From *ζώνη a belt,* and *πτερὸν a wing,* or *belted winged beetle,* a characteristic of the majority of the species.

Sp. 13. Zonopterus flavitarsis. Tab. X. fig. 7.

Niger, antennis bicoloribus, thorace nigro-tomentoso, elytris flavo bifasciatis, femoribus tibiisque atris; tarsis flavis.

Long. lin. 15; lat. lin. 4.

Caput nigrum, fronte declivi. *Antennæ* articulis quatuor primis atris, reliquis flavis. *Thorax* Callidiiformis dorso depresso. *Elytra* fasciis tribus atro-tomentosis duabusque aliis flavis. *Corpus* infrà pectore nigrino, annulisque abdominis pubescentiâ auratâ aspersis. *Pedes* femoribus tibiisque nigris, tarsis flavis subtùs spongiosis.

The above insect appears to be the type of a new genus, and also to be, as far as is known at present, peculiar to the East Indies. The nearest approximation, perhaps, is the *Saperda clavicornis* of Fabricius; it cannot, however, be arranged with any of the African longicorn beetles. A somewhat similar form (allied to the above) has lately been brought to this country from Manilla by Mr. Cuming, and no doubt they may eventually form genera of one and the same family. As the figure is ably delineated by Mr. Westwood, the foregoing short Latin characters may be regarded as sufficient to characterise the form, although the manducatory organs remain undescribed. Imperfect as they are, and clothed with the preservatives used, it is useless to attempt their examination, as the specimen, which is unique, would probably be destroyed.

Colobothea, *Serville.*

Sp. 14. Colobothea rubricollis. Tab. X. fig. 8.

Rubro-picea, antennis concoloribus, elytris nigricantibus maculis flavo-ochraceis aspersis.

Long. lin. 15; lat. lin. 4.

Caput, antennæ, femora, tibiæque rubro-piceæ. *Thorax* concolor, cylindricus. *Elytra* nigricantia, humeris apicibusque rufo-piceis, variolosa, variolis fortiter insculptis, maculis binis majoribus aliisque minoribus flavo-ochraceis per totum discum aspersa. *Corpus* infrà piceum, abdominis segmentis utrinque serie duplici macularum flavarum insignitis, annulo ultimo immaculato. *Pedes* femoribus rubro-piceis, tibiis concoloribus, apicibus ciliatis. *Tarsi* quatuor anteriores suprà nigro variegati, infrà subaurato-spongiosi, postici undique fusco-spongiosi.

The above insect, remarkable for its size, inhabits Silhet. It diverges from

the true *Colobothea*, which inhabits the New World: the Asiatic species belong to a distinct genus, and ought to be separated.

Sagridæ, *Leach.*

Sp. 15. Sagra carbunculus. Tab. X. fig. 9.

Cyanea, elytris igne auroque micantibus, pedibus posticis incrassatis; tibiis incurvis.

Long. 1. 1. 4½.

Caput, oculi, antennæ, thorax, corpus totum infrà *pedesque* cyanei. *Thorax* ferè quadratus, anticè ante oculos contractus, punctulatus. *Elytra* carbunculosa, igne auroque micantia, creberrimè punctulata. *Pedes* femoribus 4 anterioribus parùm incrassatis, tibiis subincurvis; posticis valdè incrassatis subunidentatis, tibiis arcuatis, tarsis flavo-spongiosis.

The *Chrysidæ*, or gold wasps of the *Hymenoptera*, have not unaptly been compared to the humming-birds of ornithologists; and the magnificent oriental beetles of the genus *Sagra* may justly be contrasted with the precious stones of the East, with the ruby, the sapphire and the emerald. As the above insect resembles a carbuncle, it is named accordingly.

EXPLANATION OF TAB. X.

Fig. 1. *Diphyllomorpha Mearsii.*
2. *Hexarthrius Parryi.*
3. *Odontolabis Cuvera.*
4. *Chrysochroa Edvardsii.*
5. *Monohammus sulphurifer.*
6. *Purpuricenus rubripennis.*
7. *Zonopterus flavitarsis.*
8. *Colobothea rubricollis.*
9. *Sagra Carbunculus.*